

which plans safety stock levels in order to optimize purchase value.

In response to Applicants' arguments, the Examiner has indicated that (emphasis added):

Applicant asserts that it would not have been obvious to combine the Garg and Salvo inventions "because Garg's process for optimizing the parameters for the inventory policy does not have product pricing information as an input." The examiner does not concur. Product pricing is included in the parameters h (holding cost/unit/period) and A (average cost/period).

As explained in detail below, the Examiner's understanding of Garg's teaching is patently flawed. Consequently, the Examiner's basis for concluding that independent claim 1 is obvious under 35 U.S.C. § 103(a) over Garg in view of Salvo is unsupported by either reference.

1. Holding Cost

In FIG. 2, Garg shows the complete set of parameter values 201 that are input into his inventory optimization process. Among these inputs 201, the Examiner has asserted that product pricing is included in the input parameter h, which Garg defines as "the holding cost per period" (col. 7, line 47). Holding cost for a product is a well-defined parameter in the field of operations research. In general, holding costs are the costs "associated with keeping stock over time" (see, e.g., the middle of page 2 of the reference "OR-Notes" by J. E. Besley; attached following page 6 of this Response). Accordingly, holding costs are not linked to the current market price of the product. Indeed, this fact is verified by reviewing the types of costs that are included in determining holding cost (see, e.g., the middle of page 2 of the reference "OR-Notes" by J. E. Besley; attached):

- storage costs
- rent/depreciation
- labor
- overheads (e.g., heating, lighting, security)
- money tied up (loss of interest, opportunity cost)
- obsolescence costs (if left with stock at the end of product life)
- stock deterioration (lose money if product deteriorates whilst held)
- theft/insurance

Therefore, contrary to the Examiner's assertion, product pricing is *not* included in the holding cost parameter (h).

2. Average Cost

In FIG. 2, Garg shows that the Average Cost (A) is an output of his inventory optimization process that is derived from the set of inputs 201. In equation (14), Garg teaches that the Average Cost (A) is computed based on the inventory cost (h) and the "fixed cost of placing an order" (K) (col. 7, lines 38-39). Like holding cost, the ordering cost for a product is a well-defined parameter in the field of operations research. The attached "OR-Notes" explains that ordering costs are the costs "associated with ordering and receiving an order" (see middle of page 2). Accordingly, as with holding cost, there is no link between the current market price of the product and ordering cost. Indeed, this fact is verified by reviewing the types of costs that are included in determining holding cost (see, e.g., the middle of page 2 of the reference "OR-Notes" by J. E. Besley; attached):

- clerical/labor costs of processing orders
- inspection and return of poor quality products
- transport costs
- handling costs

Thus, neither the holding cost parameter (h) nor the ordering cost parameter (K) is linked to the current market price of the product. Therefore, the average cost parameter (A), which is computed from the holding and ordering cost parameters, also is not linked to the current market price of the product.

Therefore, contrary to the Examiner's assertion, product pricing is *not* included in the average cost parameter (A).

3. Conclusion

Since none of the inputs 201 into Garg's inventory optimization process includes the current market price of the product, it is not possible for the safety stock level (SS), which is computed from these inputs 201, to be planned based at least in part on the market price of the product, contrary to the Examiner's assertion.

Therefore, contrary to the Examiner's conclusion, it would not have been obvious to one of ordinary skill in the art at the time of the invention to modify Garg's system by incorporating Salvo's inventory price source 126 "as a source for many set of input values in the Garg et al. process" because Garg's process for optimizing the parameters for the (s, S)

inventory policy does not have product pricing information as an input. Consequently, there would not have been any motivation for one of ordinary skill in the art at the time of the invention to incorporate Salvo's inventory price source 126 into Garg's optimization process.

For at least these reasons, the Examiner's rejection of independent claim 1 under 35 U.S.C. § 103(a) over Garg in view of Salvo should be withdrawn.

B. Dependent claims 2-20

Each of claims 2-20 incorporates the features of independent claim 1 and therefore these claims are patentable for at least the same reasons explained above. Claims 2-20 also are patentable for the following additional reasons. None of the claims 2-20 has been amended during prosecution of the application.

Each of claims 2-17 requires the steps of (1) estimating a maximum safety stock level of the product to cover uncertainty in demand over the exposure period with the desired service level based upon product availability from a non-spot market supply, and (2) estimating an optimal safety stock level by reducing the maximum safety stock level based upon product availability from a spot market supply. Neither Garg nor Salvo, taken alone or in any permissible combination, teaches or suggests such safety stock estimation steps.

Indeed, Garg merely discloses an inventory policy scheme in which a single safety stock level of a product (SS) needed to cover uncertainty in demand over the exposure period with the desired service level is computed. In this computation process, Garg does not distinguish among sources of supply; much less does Garg distinguish between a non-spot market supply and a spot market supply. Moreover, Garg does not even hint that the computed safety stock level (SS) could be reduced based upon product availability from a spot market supply to estimate an optimal safety stock level.

Salvo does not provide any details about computing a safety stock level of a product. The only teaching Salvo provides regarding inventory level computations may be summarized by the following representative disclosure: "the control unit 114 determines the amount of inventory used over time, can estimate future use, and determine if an inventory order is needed" (col. 5, lines 7-10).

Since each of Garg and Salvo fails to teach or suggest the above-mentioned features of claims 2-17, no permissible combination of Salvo and Garg could have taught or suggested

these features to one of ordinary skill in the art at the time of the invention. Accordingly, for at least these additional reasons, the Examiner's rejection of claims 2-17 under 35 U.S.C. § 103(a) over Garg in view of Salvo should be withdrawn.

Claim 18 recites that "planning the safety stock level comprises navigating a web site providing information relating to the use of the spot market to plan an inventory level." Neither Garg nor Salvo teaches or suggests such a feature. Accordingly, for at least this additional reason, the Examiner's rejection of claim 18 under 35 U.S.C. § 103(a) over Garg in view of Salvo should be withdrawn.

Claim 19 depends from claim 18 and further recites that "planning the safety stock level comprises navigating a web site providing to an inventory planning engine accessible through the web site information relating to product demand and information relating to non-spot market lead time." Neither Garg nor Salvo teaches or suggests such a feature. Accordingly, for at least this additional reason, the Examiner's rejection of claim 19 under 35 U.S.C. § 103(a) over Garg in view of Salvo should be withdrawn.

Claim 20 recites the step of "performing enterprise resource planning based upon the planned safety stock level." Neither Garg nor Salvo teaches or suggests such a feature. Accordingly, for at least this additional reason, the Examiner's rejection of claim 20 under 35 U.S.C. § 103(a) over Garg in view of Salvo should be withdrawn.

III. The Examiner's Final Rejection is Premature

Applicants request that the Examiner withdraw the finality of the Office action dated June 17, 2003, because the Office action is incomplete. With regard to rejections under 35 U.S.C. § 103(a), MPEP § 706.02(j) recites that (emphasis added):

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not on applicants' disclosure.